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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/909,966 08/12/97 HIGUCHI

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EXAMINER

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NEW YORK NY 10112

TEAM D
ART UNIT PAPER NUMBER

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2724
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No. 08/909,966	Applicant(s) Yuichi Higuchi
Examiner Douglas Q. Tran	Group Art Unit 2724

Responsive to communication(s) filed on _____.

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

39-41

Claim(s) 2, 3, 5, 7, 9, 11, 12, 14, 16, 18, 22-25, 27, 28, 30-33, 35, 36, 39-41 are pending in the application.
43, 45-47, 49, 55-76 is/are withdrawn from consideration.

Of the above, claim(s) _____ is/are allowed.

Claim(s) 2, 3, 5, 7, 9, 11, 12, 14, 16, 18, 22-25, 27, 28, 30-33, 35, 36, 39-41, 42 are rejected.

Claim(s) 43, 45-47, 49, 55-76 is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 55, 3, 5, 12, 14, 57, 59 and 67 are rejected under 35 U.S.C. 102(e) as being anticipated by Villalpando (U.S. Patent No. 5,740,368).

As to claim 55, Villalpando teaches:

reception means (i.e., 220 in fig. 2) for receiving a condition change signal indicating that a condition of an engine unit has changed (note printer status information is received by printer controller 220 in fig. 2, col. 4, lines 31-32);

acquisition means (note 220 in fig. 2) discussed in col. 4, line 66 through col. 5, line 7) for acquiring contents of a new condition upon reception of the condition change signal from the engine unit (col. 4, lines 31-34);

determination means (note 201 in fig. 2) for determining based on a signal indicating that a condition of the printing apparatus has changed if a new condition corresponds to a power-off notice (col. 4, lines 42-47 and 56);

informing means (note 203 in fig. 2) for supplying information indicating that a power supply is scheduled to be turned off to the host apparatus (i.e., LAN 211 in fig. 2 discussed in col.

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4, lines 37-39) when the determination apparatus determines that the new condition corresponds to the power-off notice.

As to claim 3, Villalpando teaches:

- the host apparatus is connected via a communication network, and informing means supplies the information to all host apparatus connected (col. 5, lines 53-60).

As to claim 5, Villalpando teaches:

- the determination means (note 201 in fig. 2) acquires the contents of the new condition using the condition acquisition means, and determines if the contents indicate a power off notice signal.

As to claims 12, 14, Villalpando teaches the methods are performed by the apparatus claims 3, and 5 as indicated above.

As to claims 57, 59, and 67 Villalpando teaches the methods, instructions and program products are performed by the apparatus claim 55 as indicated above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 61, 27-28, 62, 35-36, 63 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villalpando (U.S. Patent No. 5,740,368) in view of Sung (U.S. Patent No. 5,700,003).

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As to claim 61, Villalpando teaches:

reception means (i.e., 220 in fig. 2) for receiving a condition change signal indicating that a condition of an engine unit has changed (note printer status information is received by printer controller 220 in fig. 2, col. 4, lines 31-32);

acquisition means (note 220 in fig. 2) discussed in col. 4, line 66 through col. 5, line 7) for acquiring contents of a new condition upon reception of the condition change signal from the engine unit (col. 4, lines 31-34);

determination means (note 201 in 115 of fig. 2) for determining based on a signal indicating that a condition of the printing apparatus has changed if a new condition corresponds to a power-off notice (col. 4, lines 42-47);

informing means (note 203 in fig. 2) for supplying information indicating that new condition to the host apparatus (i.e., LAN 211 in fig. 2 discussed in col. 4, lines 37-39) when the determination apparatus determines that the new condition.

However, Villalpando does not teach informing means for informing to the host apparatus a new condition corresponds to a change in remaining paper quantity which determined by determination means.

Sung teaches informing means (i.e., paper thickness input unit 5 in fig. 2) for informing the host apparatus of the change in remaining paper quantity (col. 5, lines 24-26) when the determination means (i.e., remaining amount of paper sensing unit 6 in fig. 2) determines that the change in condition corresponds to the change in remaining paper quantity (col. 5, lines 31-33).

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It would have been obvious to have modified a controller of the status of printing devices of Villalpando by providing informing means for informing to the host apparatus a new condition corresponds to a change in remaining paper quantity which determined by determination means as taught by Sung. The suggestion for modifying the status of printing device of Villalpando can be reasoned by one of ordinary skill in the art as set forth by Sung because such a modification would improve the capability and efficiency of the system for providing more status options (i.e., remaining paper quantity) of a printer which would be informed to the user. Further, making a determination of low/out of paper is a very common function of printers as this informs an operator of a problem and the nature of the problem.

As to claim 27, Sung teaches:

- the determination means (i.e., remaining amount of paper sensing unit 6 in fig. 2)

determines if the contents of the change in condition correspond to the change in remaining paper quantity (col. 5, lines 31-33).

As to claim 28, Sung teaches:

- when the determination means (i.e., remaining amount of paper sensing unit 6 in fig. 2)

determines that the change in condition corresponds to the change in remaining paper quantity, the determination means also determines an actual remaining paper quantity (col. 5, line 59 through col. 6, line 4), and the informing means (i.e., paper thickness input unit 5 in fig. 2) informs the host apparatus of the actual remaining paper quantity.

As to claims 35-36, the combination of Villalpando and Sung teaches the steps are performed by claims 27-28 as indicated above.

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As to claims 62, 63 and 69, the combination of Villalpando and Sung teaches the methods, instructions and program products are performed by the apparatus claim 61 as indicated above.

5. Claims 2, 7, 9, 11, 16, 18, 56, 58, 60, 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villalpando (U.S. Patent No. 5,740,368) in view of Bender et al. (U.S. Patent No. 5,791,790).

As to claim 2, Villalpando teaches the features of claim 1 as indicated above.

However, Villalpando does not teach the information supplied from the informing means to the host includes information of an incomplete job held by the condition holding means

Bender teaches condition holding means for holding a condition of the print job received from the host apparatus, and wherein the information supplied from the informing means to a host (note NPAP 50 in fig. 2) includes information of an incomplete job held by the condition holding means (i.e., non-volatile memory discussed in col. 8, lines 22-30 and col. 4, lines 46-60).

It would have been obvious to have modified the status of printing controller in Villalpando by providing informing means for, when the power supply is turned on, supplying information of an incomplete print job to the host apparatus on the basis of the print job condition stored by the nonvolatile storage means as taught by Bender. The suggestion for modifying the printing system of Villalpando can be reasoned by one of ordinary skill in the art as set forth by Sung because such a modification would improve the capability and efficiency of the system for providing more status options (i.e., an incomplete print job) of a printer which would be informed to the user. This allows a user to take corrective actions which would then allow the print job to

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be completed. Also, providing data present and error conditions are very common processes in printers as shown by Bender.

As to claim 11, the combination of Villalpando and Bender teaches the steps are performed by claim 2 as indicated above.

As to claim 56, Villalpando teaches:

reception means (i.e., 220 in fig. 2) for receiving a condition change signal indicating that a condition of an engine unit has changed (note printer status information is received by printer controller 220 in fig. 2, col. 4, lines 31-32);

acquisition means (note 220 in fig. 2) discussed in col. 4, line 66 through col. 5, line 7) for acquiring contents of a new condition upon reception of the condition change signal from the engine unit (col. 4, lines 31-34);

determination means (note 201 in fig. 2) for determining based on a signal indicating that a condition of the printing apparatus has changed if a new condition corresponds to a power-off notice (col. 4, lines 31-32 and 56).

However, Villalpando does not explicitly teach condition informing means for, when the power supply is turned on, supplying information of an incomplete print job to the host apparatus on the basis of the print job condition stored by the nonvolatile storage means when the new condition corresponds to a power off notice condition.

Bender teaches informing means (i.e., NPAP Task 50 in fig. 2) for, when the power supply is turned on, supplying information of an incomplete print job to the host apparatus on the basis of

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the print job condition stored by the nonvolatile storage means (col. 4, lines 53-60) when the new condition corresponds to a power off notice condition (col. 4, lines 46-52).

It would have been obvious to have modified the status of printing controller in Villalpando by providing informing means for, when the power supply is turned on, supplying information of an incomplete print job to the host apparatus on the basis of the print job condition stored by the nonvolatile storage means as taught by Bender. The suggestion for modifying the printing system of Villalpando can be reasoned by one of ordinary skill in the art as set forth by Sung because such a modification would improve the capability and efficiency of the system for providing more status options (i.e., an incomplete print job) of a printer which would be informed to the user. This allows a user to take corrective actions which would then allow the print job to be completed. Also, providing data present and error conditions are very common processes in printers as shown by Bender.

As to claim 7, Villalpando teaches the features with motivation in claim 6, and:

- the host apparatus is connected via a communication network, and informing means supplies the information to all host apparatus connected (col. 5, lines 53-60).

As to claim 9, Villalpando teaches the features with motivation in claim 6, and:

- the determination means (note 201 in fig. 2) acquires the contents of the new condition using the condition acquisition means, and determines if the contents indicate a power off notice signal.

As to claims 16 and 18, Villalpando teaches the steps are performed by the apparatus claims 7 and 9 as indicated above.

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As to claims 58, 60, and 68, the combination of Villalpando and Bender teaches the methods, instructions and program products are performed by the apparatus claim 56 as indicated above.

6. Claims 22-25, 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villalpando (U.S. Patent No. 5,740,368) and Sung (U.S. Patent No. 5,700,003) as applied to claims 61 and 62 above, and further in view of Sugiyama et al. (U.S. Patent No. 5,859,956).

As to claims 22-25, the combination of Villalpando and Sung teaches the features in claim 61 as indicated above.

However, the combination of Villalpando and Sung teaches means that informs the registered condition changes in the printer to all host apparatus.

Sugiyama teaches informing means (i.e., server 8004 in fig. 75) that informs the registered condition changes (in table ETAB in fig. 76 discussed in col. 68, lines 46-47 and 59-60) in a printer to all host apparatus (note 8001 and 8002 in fig. 75 and (col. 69, lines 58-59 and col. 70, lines 23-27).

It would have been obvious to have modified to informing means of the combination of Villalpando and Sung for informing the condition change of the printer to all host apparatus as taught by Sugiyama. The suggestion for modifying informing means of the combination of Villalpando and Sung can be reasoned by one of ordinary skill in the art as set forth by Sugiyama because Sugiyama provides the registering table for registering the condition changes in a printer which allows the printer easily keeps track its changed status and informs the status to one or all of host apparatus.

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As to claims 30-33, the combination of Villalpando, Sung and Sugiyama teaches the steps are performed by the apparatus claims 22-25 as indicated above.

7. Claims 39-41, 43, 45-47, 49, 64-66 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. Patent No. 5,812,745) in view of Sugiyama et al. (U.S. Patent No. 5,859,956).

As to claim 64, Kim teaches:

reception means (i.e., memory discussed in col. 2, lines 61-65) for receiving a condition change signal indicating that a condition of the engine unit has changed;

determination means (i.e., video controller 30 in fig. 1) for determining, based on a signal indicating that a condition has changed, an item of the condition change (in table 1 in col. 3 or memory in col. 2, lines 62-64);

informing means (i.e., video controller 30 in fig. 1 discussed in col. 4, lines 3-5) for informing the host apparatus that designated the item of the condition change item determined to correspond to the stored item.

However, Kim et al. do not explicitly teach storage means for storing condition change items designated by the host apparatus.

Sugiyama teaches storage means (i.e., table ETAB in fig. 76 discussed in col. 68, lines 46-47) for storing condition change items designated by the host apparatus (i.e., the server 8004 in fig. 75).

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It would have been obvious to have modified to storing means for storing the status of printing devices of Kim as taught by Sugiyama. The suggestion for modifying the printing device of Kim can be reasoned by one of ordinary skill in the art as set forth Sugiyama because Sugiyama provides the host apparatus having a storing means for storing condition change items from the output devices which easily allows the host can keep track the changing status of output devices.

As to claim 39, Sugiyama et al. teach:

- storage means (i.e., tables in fig. 53, fig. 70 and fig. 76) stores the condition change items in units of types of host apparatuses (fig. 69 and fig. 75), the discrimination means refers to the condition change items stored in the storage means in units of types of host apparatus, and the informing means informs the host apparatus of the condition change in units of types of host apparatus.

As to claim 40, Sugiyama et al. teach:

- reception means (i.e., table ETAB in fig. 76) for receiving designations of the condition change items (col. 69, lines 59-61) from the host apparatus (i.e., server 8004 in fig. 75), and wherein the storage means (col. 68, lines 46-47) stores the condition change items received by the storage means in units of types of host apparatus (col. 70, lines 22-29).

As to claim 41, the combination of Sugiyama et al. and Kim et al. teaches:

Although neither Sugiyama et al. nor Kim et al. explicitly show the types of host apparatuses include a supervisor who supervises a system including the host apparatus and the printing apparatus, and a normal user other than the supervisor, the printing system of Sugiyama

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et al. teaches the types of host apparatuses (fig. 69, fig. 75) which can include a supervisor of host apparatus in order to the status of printer of Kim et al. in second portion of table 1 (in col.3 discussed lines 24-25) is informed the supervisor of host apparatus and a first portion of table is informed to a normal user of host apparatus.

As to claim 43, Kim et al. teach the features with the motivation in claim 38, and:

- determination means (i.e., an video controller 30 in fig. 1 discussed in col. 2, lines 59-64) determines if the contents of the change in condition acquired by the condition acquisition means correspond to one of the items designated by the host apparatus.

As to claims 45-47 and 49, Kim et al. teaches the steps are performed by the apparatus claims 39-41 and 43 as indicated above.

As to claims 65-66 and 70, the combination of Kim and Sugiyama teaches the methods, instructions and program products are performed by the apparatus claim 64 as indicated above.

8. Claims 71-76 are rejected under 35 U.S.C. 102(e) as being anticipated by Villalpando (U.S. Patent No. 5,740,368) in view of Matsuo (U.S. Patent No. 5,740,513).

As to claims 71-72, Villalpando teaches:

informing means (note 203 in fig. 2) for supplying information indicating that a power supply is scheduled to be turned off to the host apparatus connected via a network (i.e., LAN 211 in fig. 2 discussed in col. 4, lines 37-39 and col. 5, lines 53-60).

However, Villalpando does not explicitly teaches informing means for informing a host apparatus in the predetermined period after the power switch is turned off that the electric power supply is to be turned off.

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Matsuo teaches a controller (i.e., CPU 209 in fig. 37) arranged to control the electric power supply to continue to supply electric power for a predetermined period after a power switch is turned off and a controller CPU 209 still have time to perform other function during this delay time (col. 34, lines 25-28 and col. 37, lines 6-10);

It would have been obvious to modify the informing means of Villalpando have time to informing a host in the predetermined period after the power switch is turned off that the electric power supply is to be turned off as taught by Matsuo. The suggestion for modifying the controller of Villalpando can be reasoned by one of ordinary skill in the art as set forth by Matsuo because Matsuo provides the main switch has a delay function, when the user turns off the main switch, the power supply is completely stopped after a predetermined delay time. Therefore, a controller CPU 209 has time for performing other functions during this delay time.

As to claim 73-74, the combination of Villalpando and Matsuo teaches the methods are performed by the apparatus claims 71-72 as indicated above.

As to claim 75-76, the combination of Villalpando and Matsuo teaches the instructions for instructing the apparatus claims 71-72 as indicated above.

Response to Arguments and Amendment

9. Applicant's arguments filed 7/19/2000 have been fully considered but they are not persuasive.

* With respect to claims 55-63,67-68 and 69, Applicant asserted (page 29,30) " For reasons similar to those discussed above in connection with independent claims 55,57,59, and 67,

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Villalpando fails to disclose or suggest at least the claimed features regarding reception and acquisition that are recited in independent claims 56, 58, 60-63, 68 and 69". In reply, Villalpando teaches reception means (i.e., 220 in fig. 2) for receiving a condition change signal indicating that a condition of an engine unit has changed (note printer status information is received by printer controller 220 in fig. 2, col. 4, lines 31-32); and acquisition means (note 220 in fig. 2) discussed in col. 4, line 66 through col. 5, line 7) for acquiring contents of a new condition upon reception of the condition change signal from the engine unit (col. 4, lines 31-34).

Applicant asserted (page 30-31) " Sung, which is cited for its disclosure regarding determination and informing, Bender et al. which is cited for its teaching regarding a nonvolatile memory, and Sugiyama et al. which is cited for its teachings regarding multiple host apparatus, are not understood to overcome the above noted deficiencies in the teachings of Villalpando." In reply, Sung teaches informing means (i.e., paper thickness input unit 5 in fig. 2) for informing the host apparatus of the change in remaining paper quantity (col. 5, lines 24-26) when the determination means (i.e., remaining amount of paper sensing unit 6 in fig. 2) determines that the change in condition corresponds to the change in remaining paper quantity (col. 5, lines 31-33). It would have been obvious to have modified a controller of the status of printing devices of Villalpando by providing informing means for informing to the host apparatus a new condition corresponds to a change in remaining paper quantity which determined by determination means as taught by Sung. The suggestion for modifying the status of printing device of Villalpando can be reasoned by one of ordinary skill in the art as set forth by Sung because such a modification

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would improve the capability and efficiency of the system for providing more status options (i.e., remaining paper quantity) of a printer which would be informed to the user.

Bender teaches condition holding means for holding a condition of the print job received from the host apparatus, and wherein the information supplied from the informing means to a host (note NPAP 50 in fig. 2) includes information of an incomplete job held by the condition holding means (i.e., non-volatile memory discussed in col. 8, lines 22-30 and col. 4, lines 46-60). It would have been obvious to have modified the status of printing controller in Villalpando by providing informing means for, when the power supply is turned on, supplying information of an incomplete print job to the host apparatus on the basis of the print job condition stored by the nonvolatile storage means as taught by Bender. The suggestion for modifying the printing system of Villalpando can be reasoned by one of ordinary skill in the art as set forth by Sung because such a modification would improve the capability and efficiency of the system for providing more status options (i.e., an incomplete print job) of a printer which would be informed to the user.

* With respect to claims 64-66 and 70, Applicant asserted (page 33) "Therefore, the cited art (Kim et al. And Sugiyama) fails to disclose or suggest the claimed combination of features relating to storing, receiving and determining that is recited that is recited in claims 64-66 and 70.". In reply Sugiyama teaches storage means (i.e., table ETAB in fig. 76 discussed in col. 68, lines 46-47) for storing condition change items designated by the host apparatus (i.e., the server 8004 in fig. 75). It would have been obvious to have modified to storing means for storing the status of printing devices of Kim as taught by Sugiyama. The suggestion for modifying the printing device of Kim can be reasoned by one of ordinary skill in the art as set forth Sugiyama

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because Sugiyama provides the host apparatus having a storing means for storing condition change items from the output devices which easily allows the host can keep track the changing status of output devices.

For the above reasons, it is believed that the cited prior art fully discloses the claimed invention and the rejection stand.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas Q. Tran whose telephone number is (703) 305-4857 or e-mail address is Douglas.Tran@uspto.gov.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Douglas Q. Tran
Sep. 09, 2000

